



Trade secret is one of the methods of protecting intellectual property as secret and used to describe confidential information relating to trade and commerce.

It is the legal term used for confidential business information. It can be a closely guarded secret related to a process.

- ❑ The information must not be generally known or readily ascertainable through proper means, i.e. it should not be available by obvious means.
- ❑ The information must have independent economic value due to its secrecy. For example, KFC is famous for its chicken recipes, which is a secret.
- ❑ The trade secret holder must use reasonable measures under the circumstances to protect the secrecy of the information

Trade secret may be

- any formula,
- a pattern,
- a physical device,
- an idea,
- a process of manufacturing an article or food, etc.

For example, the formula for preparing a soft drink, recipes, marketing strategies, manufacturing techniques, computer algorithms and an invention for which no patent application has been filed yet.

Unlike patents, trade secrets are protected without registration, i.e. trade secrets are protected without any procedural formalities. Consequently, a trade secret can be protected for an unlimited period of time.

Advantages and disadvantages.

Advantages:

- No defined term of protection and it is recommended if anyone can manage to keep the process or formulation as secret.

Disadvantage:

- Any trade secret that could be discovered by 'reverse engineering' cannot be protected and care must be constantly exercised to ensure confidentiality

Some examples of trade secret

- MCDONALD'S BIG MAC SPECIAL SAUCE
- KRISPY KREME DOUGHNUTS
- TWINKIES - Rather than a marketing ploy, the recipe for Twinkies is kept as a trade secret because the company fears consumers will not understand what the ingredients really are and stop eating them or giving them to kids.
- WD-40 - Developed to prevent corrosion.
- LISTERINE - The inventor licensed the secret formula to Lambert Pharmaceuticals. Lambert (now Pfizer) made royalty payments to the inventor's family for over 70 years, even though the formula was revealed during that time.
- LENA BLACKBURN'S BASEBALL RUBBING MUD - The rubbing mud was developed to dull the surface of new baseballs, making them easier to grip.
- COCA-COLA
- KENTUCKY FRIED CHICKEN
- THE GOOGLE SEARCH ALGORITHM



A Geographical Indication (GI) is a sign used on goods that have a specific geographical origin and possess qualities, reputation or characteristics that are essentially attributable to that place of origin.

The Geographical Indications of Goods Act 1999 provide for registration of Handicrafts as Geographical indications (GI).

The GIs is an indication if

- ☐ it originates from a definite geographical territory,
- ☐ it is used to identify agricultural, natural or manufactured goods,
- ☐ such goods are produced, processed or prepared within that territory and
- ☐ it has a special quality or reputation or other characteristics

Advantages and Disadvantages

Advantages:

- Motivates the producers to export their goods outside the territory and promotes economic prosperity of producers in a geographical territory
- Prevents unauthorized use of a registered geographical indication by others.
- Generates revenue for the growth of the territory or the state and also for the country.

Disadvantages:

- The growth of geographical indications is a gradual process, which results due to the perfect combination of nature and skills of man and is transferred from generation to generation.

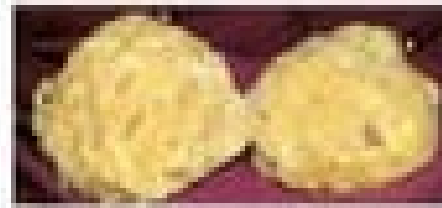
Difference between Trademark and GIs

Geographical indications	Trademark
Denotes the identity of goods having special characteristics originating from a definite territory	Is a sign or mark of goods or services, which differs from one entrepreneur to another
Identify a product with a particular territory.	Identify a product with a company or brand
Ex. The wines from 'Champagne' region of France its copyright protects and prevents others from using the word 'Champagne' for English wine. Even the name Champagne is not allowed for shampoo or perfume, as customers may get confused and believe that the product to have originated from France.	Ex. well-known trademarks include Google, Nike, and Apple.

EXAMPLES OF GIs

INDIA

- **Basmati rice**
- Mysore silk
- Mysore sandalwood oil
- Mysore sandal soap
- Mysore jasmine
- Coorg orange
- Madhubani paintings
- **Darjeeling tea**
- **Dharwad pedha**
- Alphonso mango
- **Tirupathi laddu**
- Kolhapuri chappal
- Nanjangud banana



WORLD

- Canadian whisky
- Swiss watches
- Florida oranges
- Champagne
- Tequilla.



Traditional knowledge -Protection of Indian Traditional Knowledge Act, 2016



Whether it's the lullaby you learned as a kid or the family recipe that was handed down to you. Learn how traditional knowledge protection is afforded under IPR laws

- Traditional knowledge is the knowledge base, skills and practices developed and sustained by local, indigenous and native communities. It has been preserved and passed on from one generation to another and has been the spiritual and cultural identity of that community.

Traditional Knowledge Protection

The Need to protect traditional knowledge

Protecting traditional knowledge can stop unauthorized, commercial misuse of this knowledge base. If it remains unprotected, indigenous people who are responsible for bringing it to the forefront can end up suffering huge losses, on an emotional as well as a financial level.

By protecting traditional knowledge, one can protect and preserve ancient practices.

How to protect traditional knowledge

Protected through two methods – positive protection and defensive mechanism.

Positive protection

Positive protection is the act of providing traditional knowledge holders with the rights to take necessary action and seek remedies against the misuse of the knowledge base. It involves the enactment of specific rules and regulations and laws, as well as access to benefit-sharing provisions, royalty payments, etc.

Defensive mechanism

Defensive mechanism, on the other hand, refers to the steps taken by traditional knowledge owners to prevent the acquisition of their Intellectual Property rights. This knowledge protection method helps traditional knowledge holders protect intellectual property rights that are illegitimately acquired by third parties.

Threat to traditional knowledge Individuals

- The threat to traditional knowledge Individuals holding traditional knowledge often end up facing several difficulties.
- If it remains unprotected, the very survival of the knowledge could be at stake, as it could threaten the culture of communities.
- Traditional means of maintaining and passing on knowledge to future generations are weakened by several social and environmental factors such as encroaching modern lifestyles, migration, etc.
- Traditional knowledge holders do not receive appreciation and respect for their wisdom. With the rapid advancement of science and technology, traditional knowledge often gets overlooked. While modern concepts have replaced our understanding of traditional knowledge,

Therefore, we must give credit where it is due. It is incredibly essential to preserve and protect traditional knowledge.

Traditional knowledge Protection under IPR

- The most critical aspect of traditional knowledge in IPR is its protection. While there have been several debates about protection under the Intellectual Property regime, there are also several challenges at hand.

For instance, it is difficult to determine the Intellectual Property Rights under which traditional knowledge may be protected. It is also challenging to ascertain how traditional knowledge can get continuous protection since every IP protection lasts for only a limited period.

- Traditional knowledge protection primarily exists to tackle the problem of biopiracy – where traditional knowledge has been used for commercial purposes without proper and prior authorization of the concerned indigenous community.

Devising an effective traditional knowledge protection strategy

A traditional knowledge protection strategy must take into account the community as well as the regional, national and international dimensions of IP rights.

Moreover, mechanisms implemented to protect traditional knowledge must give unbiased and independent considerations to the original traditional knowledge holders.

It is just as critical to address the economic aspects of developing the knowledge base and to ensure that such protection can be accessed, understood and afforded by knowledge holders.

The protection afforded should fundamentally be concerned with recognizing the rights held by the original knowledge holders and the unauthorized acquisition of rights by third parties.

Conclusion

The only way to ensure that traditional knowledge remains safe is to take the necessary measures to protect it. There is an imminent need to afford adequate traditional knowledge protection to indigenous communities residing in under-developed and developing countries. With globalization and international co-operation and co-ordination becoming everyday trends, it is has become all the more necessary to protect as well as establish traditional knowledge. Thanks to Intellectual Property Rights, there is hope that traditional knowledge will be preserved.

Colgate Case

- Colgate, the world's largest producer of toothpaste, patented a tooth cleaning powder.
- American household goods giant was granted the patent in the U.S. in June for what it claimed was a groundbreaking "red herbal dentifrice."
- Indian activists claim that the patent is bogus because the ingredients - including clove oil, camphor, black pepper and spearmint - have been used for the same purpose for hundreds, "if not thousands," of years on the subcontinent.
- However, its patent filing argues that the use of red iron oxide, which is less abrasive than ingredients in traditional toothpaste, is new.
- According to Colgate the old recipe has become new, and through this "legal contraption", the American company intends not to pay royalties.
- India is in the process of creating 34 million web pages to help prevent the "biopiracy" of its ancient folk remedies that document the techniques and claim them as Indian property.
- The matter is pending before the USPTO.

Turmeric Case



- In 1995, two Indian nationals at the University of Mississippi Medical Centre were granted US patent no. 5,401,504 on "use of turmeric in wound healing".
- The Indian Council of Scientific and Industrial Research (CSIR) requested the US Patent and Trademark Office (USPTO) to re-examine the patent.
- CSIR argued that turmeric has been used for thousands of years for healing wounds and rashes and therefore its medicinal use was not novel.
- Their claim was supported by documentary evidence of traditional knowledge, including an ancient Sanskrit text and a paper published in 1953 in the Journal of the Indian Medical Association.
- Despite arguments by the patentees, the USPTO upheld the CSIR objections and revoked the patent.

Basmati Rice Case



- In late 1997, an American company RiceTec Inc, was granted a patent by the US patent office to call the aromatic rice grown outside India 'Basmati'. RiceTec Inc, had been trying to enter the International Basmati market with brands like 'Kasmati' and 'Texmati' described as Basmati-type rice with minimal success.
- CSIR challenged the rice patent.
- After reexamination, the USPTO disallowed all the physical characteristic claims.
- The Indian Government, a strong advocate of geographical indications for food products, claimed victory when the USPTO limited the number of claims granted to RiceTec.
- RiceTec still has a patent and can still call its rice Basmati.



Basics of

Industrial Designs



Industrial designs - Designs Act , 2000

Industrial designs refer to creative activity which results in the ornamental or formal appearance of a product.

It consist of :

- 3D features, such as shape of the product
- 2D features, such as pattern, line, colour of a product
- a combination of one or more such features

And 'design rights' refers to a novel or original design that is accorded to the proprietor of a validly registered design.

Act aims at enacting a more detailed classification of design to conform to the international system and to take care of the proliferation of design-related activities in various fields.

Designs are considered to be independent. The designs of two apparently unrelated articles like a pair of shoes and a door handle are claimed in separate applications. For related articles, the design can be considered as distinct if they possess different shapes and appearances.

To qualify for the design, the subject must conform to the following features:

- ☐ it must have ornamental or aesthetic aspects of a useful article,
- ☐ it must have a definite shape, pattern or colour combination and
- ☐ it should be reproducible by industrial means (otherwise creation work of art like painting is copyrightable).

- The design can also function as a trademark if it is embodied in an article.
- Only colour by itself does not form the subject matter of the design.
- Combinations of known designs without any significant distinguishable changes or designs which comprise or contain scandalous or obscene matter are not registered under the Act.
- The term of copyright in design under the Act is 10 years from the date of registration. It can be extended up to 5 years.

The registration of design grants the following rights:

- ☐ Right to exclusive use of the design
- ☐ Right to protect the design from piracy.

The judicial remedies are also available for the infringement of design like damages and injunction

The Purpose of Industrial Design

To improve the overall user experience: By creating products that are visually appealing, ergonomic, and intuitive to use.

Industrial designers work closely with engineers, marketing teams, and manufacturers to ensure that the final product not only meets the technical requirements but also resonates with the target audience.

They consider factors such as materials, manufacturing processes, cost-effectiveness, and sustainability while crafting designs that are both functional and aesthetically pleasing.

Tips for Effective Industrial Design

- Understand the target audience: To create successful industrial designs, it is crucial to understand the needs, preferences, and behavior of the target audience. Conduct user research and gather feedback , that can provide valuable insights for designing products that truly resonate with users.
- Embrace simplicity: Minimalism and simplicity are often key elements of successful industrial designs. Streamlining the visual elements and removing unnecessary complexities can enhance the usability and appeal of a product.
- Stay updated with technology and trends: Industrial design is a dynamic field that evolves with advancements in technology and changes in consumer preferences. staying updated with the latest trends and incorporating innovative technologies can give designers a competitive edge.

Examples of Industrial Design

- iPhone: The sleek and minimalist design, combined with a user-friendly interface, revolutionized the smartphone industry. The designers at Apple meticulously considered every aspect of the device, from the shape and size to the placement of buttons and ports, to create a seamless and intuitive user experience.



- Tesla Model S. The electric car not only offers cutting-edge technology and performance but also boasts a sleek and futuristic design. The clean lines, aerodynamic shape, and attention to detail make it a standout in the automotive industry.



Semiconductor Integrated Circuit of Layout Designs -The SICLD Act of 2000



- Integrated circuits – commonly known as “chips” or “micro-chips” – are the electronic circuits in which all the components (transistors, diodes and resistors) have been assembled in a certain order on the surface of a thin semiconductor material (usually silicon).

In modern technology, integrated circuits are essential elements for a wide range of electrical products, including articles of everyday use, such as watches, television sets, washing machines, and cars, as well as sophisticated computers, smart phones, and other digital devices. Developing innovative layout designs of integrated circuits is essential for the production of ever-smaller digital devices with more functions.

- Creation of a new layout-design is usually the result of an enormous investment, both in financial terms and in terms of the time required from highly qualified experts, the copying of such a layout-design may cost only a fraction of the original investment.

Therefore, In order to prevent unauthorized copying of layout designs and to provide incentives for investing in this field, the layout design (topography) of integrated circuits is protected under a sui generis intellectual property system.

- An “integrated circuit” means a product, in its final form or an intermediate form, in which the elements, at least one of which is an active element, and some or all of the interconnections are integrally formed in and/or on a piece of material and which is intended to perform an electronic function.
- “Layout-design (topography)” means the three-dimensional disposition, however expressed, of the elements, at least one of which is an active element, and of some or all of the interconnections of an integrated circuit, or such a three-dimensional disposition prepared for an integrated circuit intended for manufacture.
- Layout-designs of integrated circuits are also called topographies of integrated circuits or mask works of semiconductor chip products.

Condition required

- A layout design of an integrated circuit can be protected if it is original in the sense that it is the result of the creators' own intellectual effort and not commonplace among creators of layout-designs and manufacturers of integrated circuits at the time of the creation.
- In general, protection of the topography requires that an integrated circuit be registered or commercially exploited.

Kind of protection

In general, a right holder has the exclusive right to prevent or stop others from commercially using the protected layout designs.

In other words, the original layout design cannot be reproduced entirely or partly for commercial purposes by others, without the authorization of the holder of the right.

Further, without the authorization of the right holder, a protected layout-design, an integrated circuit incorporating the layout design, or an article incorporating such a layout design cannot be imported, sold or otherwise distributed, for commercial purposes.

How to protect layout design of IC

- In some countries, topographies of integrated circuits have to be registered in order to obtain protection. In general, such registrations take place without extensive examination. However in some countries, an application for registration must be filed within two years and protection commences with the first commercial exploitation. In other countries, the protection starts automatically with the first commercial exploitation, separately, or as incorporated in an integrated circuit.
- In general, an application for registration has to contain
 1. information of the owner
 2. a title and
 3. a drawing of the topography, and
 4. a detailed description or deposit of the topography of the integrated circuit.

submission of a sample of that integrated circuit, along with information defining the electronic function performed by the integrated circuit, may be also required. Registration is usually subject to the payment of a fee.

Extent of exclusive rights

- The extent of the exclusive rights varies from one country to another. In general, a right holder has the exclusive right to prevent or stop others from commercially using the protected layout design.
- In other words, the original topography cannot be reproduced entirely or partly for commercial purposes by others, without the authorization of the holder of the right. Further, without the authorization of the right holder, a protected layout design, an integrated circuit, or an article which incorporates an unlawfully reproduced layout-design cannot be imported, sold or otherwise distributed, for commercial purposes by others without the authorization of the holder of the right.
- However, the performance of an act by a third party for private use or for the sole purpose of evaluation, analysis, research or teaching is not considered to require the authorization of the right holder. Therefore, “reverse engineering” of an integrated circuit for such purposes is not restricted.
- In sum, layout designs of integrated circuits are protected against copying of the topographies and against the distribution of products which integrate copied topographies, but the right holder cannot prevent others from developing other original topographies which have the same functions as those of protected topographies.

Protection of plant varieties & farmer's rights-



In order to provide for the establishment of an effective system for protection of plant varieties, the rights of farmers and plant breeders and to encourage the development of new varieties of plants it has been considered necessary to recognize and protect the rights of the farmers in respect of their contribution made at any time in conserving, improving and making available plant genetic resources for the development of the new plant varieties. Moreover to accelerate agricultural development, it is necessary to protect plants breeders' rights to stimulate investment for research and development for the development of new plant varieties.

The objectives of the Protection of Plant Varieties and Farmers' Rights Act are:

- (i) to stimulate investments for research and development both in the public and the private sectors for the developments of new plant varieties by ensuring appropriate returns on such investments;
- (ii) to facilitate the growth of the seed industry in the country through domestic and foreign investment which will ensure the availability of high quality seeds and planting material to Indian farmers; and
- (iii) to recognize the role of farmers as cultivators and conservers and the contribution of traditional, rural and tribal communities to the country's agro biodiversity by rewarding them for their contribution through benefit sharing and protecting the traditional right of the farmers.

What kind of varieties are registerable under the plant variety Act?

1. A new variety if it conforms to the criteria of novelty, distinctiveness, uniformity and stability.
2. An extant variety if it conforms to criteria of distinctiveness, uniformity and stability

A) Novelty – Novel if at the date of filing of the application for registration for protection, the propagating or harvested material of such variety has not been sold or otherwise disposed of by or with the consent of breeder or his successor for the purpose of exploitation of such variety-

- (i) in India earlier than one year or
- (ii) outside India , in the case of trees or vines earlier than six years or in any other case, earlier than four years, before the date of filing such application:

B) Distinctiveness – It should be clearly distinguishable by at least one essential characteristic from any other variety whose existence is a matter of common knowledge in any country at the time of filing of the application.

C) Uniformity – New plant variety will pass uniformity test, if subject to the variation that may be expected from the particular features of its propagation, it is sufficiently uniform in its essential characteristics.

D) Stability – New plant variety will be considered stable if its essential characteristics remain unchanged after repeated propagation or, in the case of a particular cycle of propagation, at the end of each such cycle.
Compulsory Plant Variety denomination:

Which plant varieties can not be protected under this Act?

A plant variety which is :-

- (i) not capable of identifying such variety; or
- (ii) consists solely of figures; or
- (iii) is liable to mislead or to cause confusion concerning the characteristics, value, identify of such variety, or the identity of breeder of such variety;
- (iv) is likely to deceive the public or cause confusion in the public regarding the identity of such variety;
- (v) is comprised of any matter likely to hurt the religious sentiments respectively of any class or section of the citizens of India;
- (vi) is prohibited for use as a name or emblem for any of the purposes;
- (vii) is comprised of solely or partly of geographical name.

term of plant variety protection

- (i) in the case of trees and vines, eighteen years from the date of registration of the variety;
- (ii) in the case of extant varieties, fifteen years from the date of the notification of that variety by the Central Government under section 5 of the Seeds Act, 1966
- (iii) in the other cases, fifteen years from the date of registration of the variety.

Initially the certificate of registration shall be valid for nine years in the case of trees and vines and six years in the case of other crops and may be revived and renewed for the remaining period on payment of fees as may be fixed by the rules.

UPOV

- UPOV is an abbreviation of Union pour la Protection des Obtentions Vegetales (Union for protection of new varieties of plant). It is an international convention which provides a common basis for the examination of plant varieties in different member States of UPOV for determining whether a plant variety merits protection under UPOV or not.

Protection of Biological Diversity

It aims

- **conservation of biological resources,**
- managing its **sustainable use** and
- **enabling fair and equitable sharing benefits** arising out of the use and knowledge of biological resources with the local communities.



Biodiversity
Act, 2002

Salient Features of the Act

The Act prohibits the following activities without the prior approval from the **National Biodiversity Authority**:

- Any person or organization (either based in India or not) obtaining any biological resource occurring in India for its research or commercial utilization.
- The transfer of the results of any research relating to any biological resources occurring in, or obtained from, India.
- The claim of any intellectual property rights on any invention based on the research made on the biological resources obtained from India.

The act envisaged a three-tier structure to regulate the access to biological resources:

- **The National Biodiversity Authority** (NBA)
- **The State Biodiversity Boards** (SBBs)
- **The Biodiversity Management Committees** (BMCs) (at local level)

The Act provides these authorities with special funds and a separate budget in order to carry out any research project dealing with the biological natural resources of the country.

- It shall supervise any use of biological resources and the sustainable use of them and shall take control over the financial investments and their return and dispose of those capitals as correct.

- Under this act, the Central Government in consultation with the NBA:
 - Shall notify **threatened species** and prohibit or regulate their collection, rehabilitation and conservation
 - Designate institutions as repositories for different categories of biological resources
- The act stipulates all offences under it as **cognizable and non-bailable.**
- Any grievances related to the determination of benefit sharing or order of the National Biodiversity Authority or a State Biodiversity Board under this Act, shall be taken to the National Green Tribunal

Exemptions from the Act

- The Act excludes Indian biological resources that are normally traded as commodities.
 - Such exemption holds only so far the biological resources are used as commodities and for no other purpose.
- The act also excludes traditional uses of Indian biological resources and associated knowledge and when they are used in collaborative research projects between Indian and foreign institutions with the approval of the central government.
- Uses by cultivators and breeds, e.g. farmers, livestock keepers and bee keepers and traditional healers e.g. vaid and hakims are also exempted.

The National Biodiversity Authority

The **National Biodiversity Authority (NBA)** was established in **2003** by the Central Government to implement India's Biological Diversity Act (2002).

It is a **Statutory body** that performs facilitative, regulatory and advisory functions for the Government of India on the issue of Conservation and sustainable use of biological resources.

The NBA has its **Headquarters in Chennai**, Tamil Nadu, India.

Structure of the NBA

- **A Chairperson**
- **Three ex officio members**, one representing the Ministry dealing with Tribal Affairs and two representing the Ministry dealing with Environment and Forests.
- **Seven ex-officio members** to represent respectively the Ministries of the Central Government dealing with:
 1. Agricultural Research and Education
 2. Biotechnology
 3. Ocean Development
 4. Agriculture and Cooperation
 5. Indian Systems of Medicine and Homoeopathy
 6. Science and Technology
 7. Scientific and Industrial Research;
- **Five non-official members** to be appointed from amongst specialists and scientists having special knowledge and experience in the required matters.

Functions of the NBA

- Creating an enabling environment, as appropriate, to promote conservation and sustainable use of biodiversity.
- **Advising the central government, regulating activities and issuing guidelines** for access to biological resources and for fair and equitable benefit sharing in accordance with the Biological Diversity Act, 2002.
- Taking necessary **measures to oppose the grant of intellectual property rights** in any country outside India on any biological resource obtained from India or knowledge associated with such biological resources derived from India illegally.
- **Advising the State Governments** in the selection of areas of biodiversity importance to be notified as heritage sites and suggest measures for their management.

State Biodiversity Boards (SBBs)

- The SBBs are established by the State Governments in accordance with Section 22 of the Act.
- Structure: The State Biodiversity Board consists of the following members:
 - A Chairperson
 - Not more than five ex officio members to represent the concerned Departments of the State Government
 - Not more than five members from amongst experts in matters relating to conservation of biological diversity, sustainable use of biological resources and equitable sharing of benefits arising out of the use of biological resources.
 - All the members of the SBB are appointed by the respective State Government

Functions of SBBs

- Advise the State Government, subject to any guidelines issued by the Central Government, on matters relating to the conservation, sustainable use or sharing equitable benefits.
- Regulate by granting approvals or otherwise requests for commercial utilization or bio-survey and bio-utilisation of any biological resource by people.

Biodiversity Management Committees (BMCs)

- According to Section 41 of the Act, every local body shall constitute the BMC within its area for the purpose of promoting conservation, sustainable use and documentation of biological diversity including:
 - Preservation of habitats
 - Conservation of Landraces
 - Folk varieties and cultivars
 - Domesticated stocks And breeds of animals
 - Microorganisms And Chronicling Of Knowledge Relating To Biological Diversity

Structure

- It shall consist of a chair person and not more than six persons nominated by the local body.
 - Out of total members of a BMC, not less than 1/3rd should be women and not less than 18% should belong to the Scheduled Castes/ Scheduled Tribes.
- The Chairperson of the Biodiversity Management Committee shall be elected from amongst the members of the committee in a meeting to be chaired by the Chairperson of the local body.
- The chairperson of the local body shall have the casting votes in case of a tie.





Functions

- The main function of the BMC is to prepare People's Biodiversity Register in consultation with the local people.
- The register shall contain comprehensive information on availability and knowledge of local biological resources, their medicinal or any other use or any other.

Biodiversity Heritage Sites (BHS)

- Under Section 37 of Biological Diversity Act, 2002 the State Government in consultation with local bodies may notify the areas of biodiversity importance as Biodiversity Heritage Sites.
- The Biodiversity Heritage Sites are the well defined areas that are unique, ecologically fragile ecosystems - terrestrial, coastal and inland waters and, marine having rich biodiversity comprising of any one or more of the following components:
 - richness of wild as well as domesticated species or intra-specific categories
 - high endemism
 - presence of rare and threatened species
 - keystone species
 - species of evolutionary significance
 - wild ancestors of domestic/cultivated species or their varieties
 - past preeminence of biological components represented by fossil beds
 - having significant cultural, ethical or aesthetic values; important for the maintenance of cultural diversity (with or without a long history of human association with them)

Conclusion

Today, India is on its way to adopting a balanced approach towards creating a stimulus for the betterment of the IPR industry as a whole. Recent developments in India, be it the New IPR policy or providing an effective toolkit in the form of checklist that will act as a reckoner for the police to deal with IP crimes or encouragement to innovators in terms of speedy patent examination in case they file first in India, all are a part of much needed attempt to improve the overall security of IPR and encouragement to create more IP in the country. India is having all the resources in terms of available raw material, cheap labour, innovative and creative dedicated manpower. No doubt that India will definitely harness its proportionate share in global trade by exploration in Intellectual Property Rights and mark its footprint on international map as "Creative India; Innovative India"   ;  .

